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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/505,444	SIMONIS, HELMUT MATTHIAS
	Examiner	Art Unit
	SYED BOKHARI	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *12 May 2008*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-28* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) *1-28* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All   b) ☐ Some *   c) ☐ None of:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____.
   3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant amendment filed on May 12th, 2008 has been entered. Claims 1-28 are

still pending in the application.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Regarding claim 28, "a computer program for performing the method when

operated in computer system" is not limited to statutory subject matter and is therefore

non statutory. An article comprising machine readable medium embodying information

indicative of instructions that when performed by one or more machine results in

operation would normally be considered statutory. For example, the acceptable

language in computer related claim will be "computer readable medium encoded with a

computer program".

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 1 is rejected because "through said nodes and/or links" and "calculating

values and/or upper and lower bound" are vague and indefinite.

Claim 2 is rejected because "engineering constraints and/or modified traffic" is

vague and indefinite.

Claim 5 is rejected because "network topology and/or the network behavior" is

vague and indefinite.

Claim 11 is rejected because "overload and/or traffic volume" is vague and

indefinite.

Claim 16 is rejected because "at different time and/or at periodic intervals" is

vague and indefinite.

Claim 17 is rejected because "said nodes and/or links" are vague and indefinite.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
       obviousness or nonobviousness.

7.   Claims 1, 5, 10 and 23-24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over San Filippo III (USP 7,068,630) in view of Maynard et al. (WO

96/199905).

San Filippo, III discloses a communications systems for measuring load between

devices for use in determining path with optimal throughput with the following features:

regarding claim 1, a method of calculating traffic values in a communication network

(Fig. 1, communication system employing load measurement, see "node measure its

own load and communicates its load to neighboring nodes" recited in column 1 lines

62-67 and column 2 lines 1-7), the communications network comprising a plurality of

nodes the nodes being connected to one another by links the method comprising

(Fig. 1, communication system employing load measurement, see "system having a

plurality of nodes connected to each other" recited in column 1 lines 54-62), obtaining

traffic data measurements through the nodes and/or links in an initial scenario as input

data (Fig. 1, communication system employing load measurement, see "monitoring and

measuring the load of each of communication links " recited in column 2 lines 47-60);

regarding claim 5, further comprising the step of verifying the consistency of the

measured input data (Fig. 1, communication system employing load measurement, see

"load measurement is determined with accuracy with synchronized period of load"

recited in column 2 lines 61-67 and column 3 lines 1-2) and using information about the

network topology and/or the network behavior of the initial scenario (Fig. 1,

communication system employing load measurement, see "the load measurement

elements each monitor the traffic on the point to point paths between their associated e-

radio, poletop and wireless modem" recited in column 2 lines 23-39);

San Filippo, III does not disclose the following features: regarding claim 1,

deriving a traffic flow model for a modified scenario using a plurality of constraints

describing the interdependency of the initial to the modified scenario and calculating

values and/or upper and lower bounds of traffic values for the modified scenario from

the traffic flow model using the input data; regarding claim 10, wherein traffic values

which are not affected by the modification from the initial to the modified scenario are

equal to the corresponding input data or corrected input data of the initial scenario;

regarding claim 23, further comprising repeating stages (b), (c) and (d) for different

modifications of the network; regarding claim 24, further comprising calculating a

minimal and a maximal value for each solution variable taking into account one or more

of the different modifications.

Maynard et al. disclose a communication model for controlling communication

channel access with the following features: regarding claim 1, deriving a traffic flow

model for a modified scenario using a plurality of constraints describing the

interdependency of the initial to the modified scenario (Fig. 6, illustrates a flow chsrt of a

method of comparing the communication system based on a traffic prediction, see "after

collecting traffic data (step 102), generates traffic model process (step 104) and then

channel allocations are determined" recited in lines 23-29 page 7 and lines 3-11 page 8)

and calculating values and/or upper and lower bounds of traffic values for the modified

scenario from the traffic flow model using the input data (Fig. 6, illustrates a flow chsrt of

a method of comparing the communication system based on a traffic prediction, see

"transmits the calculated channel allocations (step 108) by evaluating call data records

(CDR) recited in lines 29-36 page 7 and lines 11-14 page 12-16); regarding claim 10,

wherein traffic values which are not affected by the modification from the initial to the

modified scenario are equal to the corresponding input data or corrected input data of

the initial scenario (Fig. 2, illustrating a configuration of a gateway and a system control

segment, see "the input traffic data to SCS 52 from GWs 50 over link 54for creating a

subscriber prediction" recited in lines 29-37 page 5 and line 1 page 6); regarding claim

23, further comprising repeating stages (b), (c) and (d) for different modifications of the

network (Fig. 6, illustrates a flow chsrt of a method of comparing the communication

system based on a traffic prediction, see "transmits the calculated channel allocations

(step 108) by evaluating call data records (CDR) recited in lines 29-36 page 7 and lines

11-14 page 12-16); regarding claim 24, further comprising calculating a minimal and a

maximal value for each solution variable taking into account one or more of the different

modifications (Fig. 6, illustrates a flow chsrt of a method of comparing the

communication system based on a traffic prediction, see "transmits the calculated

channel allocations (step 108) by evaluating call data records (CDR) recited in lines 29-

36 page 7 and lines 11-14 page 12-16);

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of San Filippo, III by using the features, as taught by

Maynard et al., in order to provide deriving a traffic flow model for a modified scenario

using a plurality of constraints describing the interdependency of the initial to the

modified scenario and calculating values and/or upper and lower bounds of traffic

values for the modified scenario from the traffic flow model using the input data traffic

values which are not affected by the modification from the initial to the modified scenario

are equal to the corresponding input data or corrected input data of the initial scenario

repeating stages (b), (c) and (d) for different modifications of the network.

8.   Claims 6-7, 9, 11-12 and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Filippo III (USP 7,068,630) in view of Maynard et al. (WO 96/199905)

as applied to claim 1 and 6 above, and further in view of Saito (US 6,404,744 B1).

San Filippo, III and Maynard et al. disclose the claimed limitations as described in

paragraph 7 above. San Filippo, III and Maynard et al. do not disclose the following

features: regarding claim 6, wherein the input data are corrected if inconsistencies are

detected; regarding claim 7, further comprising solving a linear programming problem

with a linear objective function to minimize the data traffic reconciliation (error

correction); regarding claim 9, wherein in step (b) the traffic values in the modified

scenario are expressed as a linear function of node-to-node flows in the initial scenario;

regarding claim 11, wherein the traffic values comprise utilization, overload and/or traffic

volume values and regarding claim 12, wherein the constraints comprise linear

constraints; regarding claim 19, wherein the solution variables can be expressed as a

linear function of one or more node-to-node flows of the network.

Saito discloses communication network design techniques to cope with demand

variations and network fault with the following features: regarding claim 6, wherein the

input data are corrected if inconsistencies are detected (Fig. 2, a block diagram showing

the configuration of a communication network design system, see "the input data is

supplied to produce optimized network design" recited in column 4 lines 23-38);

regarding claim 7, further comprising solving a linear programming problem with a linear

objective function to minimize the data traffic reconciliation (error correction) (Fig. 1, a

block diagram showing the configuration of a conventional communication network, see

"solves a linear programming problem with maximizing or minimizing an objective

function" recited in column 1 lines 39-0 in background of the invention; regarding

claim 9, wherein in step (b) the traffic values in the modified scenario are expressed as

a linear function of node-to-node flows in the initial scenario; regarding claim 11,

wherein the traffic values comprise utilization, overload and/or traffic volume values

(Fig. 2, a block diagram showing the configuration of a communication network design

system, see "solving this linear programming is obtained by the transformation

processing" recited in column 6 lines 11-21) and regarding claim 12, wherein the

constraints comprise linear constraints (Fig. 1, a block diagram showing the

configuration of a conventional communication network, see "represented by a linear

equation under the constraint condition represented with some linear equalities or

inequalities" recited in column 1 lines 47-50); regarding claim 19, wherein the solution

variables can be expressed as a linear function of one or more node-to-node flows of

the network (Fig. 3, operation 300 of output controller 110, see "maintain a congestion

model comprising plurality of congestion dependencies and relieve congestion by

increasing output resources and decreasing traffic rates" recited in column 1 line 67 and

column 2 lines 1-16);

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of San Filippo, III by using the features, as taught by

Saito et al., in order to provide the input data are corrected if inconsistencies are

detected solving a linear programming problem with a linear objective function to

minimize the data traffic reconciliation (error correction), the traffic values in the

modified scenario are expressed as a linear function of node-to-node flows in the initial

scenario, the traffic values comprise utilization, overload and/or traffic volume values,

the constraints comprise linear constraints and the solution variables can be expressed

as a linear function of one or more node-to-node flows of the network. The motivation of

using these functionalities is to enhance the system in a cost effective manner.

9.   Claims 2-3, 8, 15, 17, 25-26 and 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Filippo III (USP 7,068,630) in view of Maynard et al. (WO 96/199905)

as applied to claim 1 and 17 above, and further in view of Aukia et al. (USP 6,594,268

B1).

        San Filippo III discloses the following features: and regarding claim 17, a method

of calculating traffic values in a communications network (Fig. 1, communication system

employing load measurement, see "node measure its own load and communicates its

load to neighboring nodes" recited in column 1 lines 62-67 and column 2 lines 1-7), the

communications networking comprising a plurality of nodes the nodes being connected

to one another by links, the method comprising (Fig. 1, communication system

employing load measurement, see "system having a plurality of nodes connected to

each other" recited in column 1 lines 54-62), obtaining data traffic data measurements

through the nodes and/or links in an initial scenario as input data (Fig. 1, communication

system employing load measurement, see "monitoring and measuring the load of each

of communication links " recited in column 2 lines 47-60) regarding claim 26, an

apparatus for calculating traffic values in a communications network (Fig. 2, output

controller 110, see "identify and determine for possible source of congestion from

incoming traffic" recited in column 3 lines 44-66).

        Maynard et al. discloses the following features: regarding claim 17, deriving a

traffic flow model using the input data and the relations for calculating the solution

variables (Fig. 6, illustrates a flow chsrt of a method of comparing the communication

system based on a traffic prediction, see "after collecting traffic data (step 102),

generates traffic model process (step 104) and then channel allocations are

determined" recited in lines 23-29 page 7 and lines 3-11 page 8);

San Filippo II and Maynard et al. disclose the claimed limitations as described in

paragraph 7 above, San Filippo III and Maynard et al. do not disclose the following

features: regarding claim 17, defining one or more solution variables for the modified

scenario and determining constraints between traffic flows through the links and nodes

to describe the network topology and behavior of the network; regarding claim 2,

wherein the modified scenario comprises one or more of: a modified network topology,

modified routing algorithm parameters, modified traffic engineering constraints and/or

modified traffic load compared to the initial scenario and claim 3, wherein the

constraints are derived from the network topology and network behavior of the initial

network; regarding claim 8, further comprising solving a linear programming problem

with a non-linear objective function to minimize the data traffic reconciliation (error

correction) and regarding claim 15, further comprising: selecting a first and a second

node; solving a first linear programming problem by computing the upper bound of

traffic flow values from the first to the second node; and solving a second linear

programming problem by computing the lower bound of traffic flow values from the first

to the second set of nodes; regarding claim 17, defining one or more solution variables

for the modified scenario and determining constraints between traffic flows through the

links and nodes to describe the network topology and behavior of the network and

regarding claim 25, further comprising calculating one consistent solution for all solution

variables taking into account all the modifications; regarding claim 28, a computer

program for performing the method of claim 1 when operated in a computer system.

Aukia et al. disclose a communication system for adaptive routing system and

method for QoS with the following features: regarding claim 2, wherein the modified

scenario comprises one or more of a modified network topology, modified routing

algorithm parameters, modified traffic engineering constraints and/or modified traffic

load compared to the initial scenario (Fig. 5, a block diagram of a distributed processing

and database system, see "the routing module 506 may require additional network

topology information than that currently collected" recited in column 14 lines 45-52);

regarding claim 3, wherein the constraints are derived from the network topology and

network behavior of the initial network (Fig. 10, shows an flowchart for a router

implementing adaptive routing when a trigger event is detected, see "initial values are

provided to define the network topology and network characteristics" recited in column

21 lines 25-38); regarding claim 8, further comprising solving a linear programming

problem with a non-linear objective function to minimize the data traffic reconciliation

(error correction) (Fig. 10, shows an flowchart for a router implementing adaptive routing

when a trigger event is detected, see "the performance is maximized by solving the

linear programming problem" recited in column 26 lines 15-19) and regarding claim 15,

further comprising selecting a first and a second node (Fig. 1, shows a block diagram of

a packet network employing adaptive routing, see "information is collected for each

packet flow thorough one or more routers" recited in column 4 lines 62-66), solving a

first linear programming problem by computing the upper bound of traffic flow values

from the first to the second node (Fig. 1, shows a block diagram of a packet network

employing adaptive routing, see "the QoS provisioning commitments may be associated

class field described in table 2 for maximum traffic flow" recited in column 7 lines 50-55

and Table 2) and computes AP power adjustment (step 505)" recited in column 9 lines

26-66) and solving a second linear programming problem by computing the lower bound

of traffic flow values from the first to the second set of nodes (Fig. 1, shows a block

diagram of a packet network employing adaptive routing, see "the QoS provisioning

commitments may be associated class field described in table 2 for minimum traffic

flow" recited in column 7 lines 50-55 and Table 2); regarding claim 17, defining one or

more solution variables for the modified scenario (Fig. 5, a block diagram of a

distributed processing and database system, see "the routing module 506 may require

additional network topology information than that currently collected" recited in column

14 lines 45-52) and determining constraints between traffic flows through the links and

nodes to describe the network topology and behavior of the network (Fig. 10, shows an

flowchart for a router implementing adaptive routing when a trigger event is detected,

see "initial values are provided to define the network topology and network

characteristics" recited in column 21 lines 25-38) and regarding claim 25, further

comprising calculating one consistent solution for all solution variables taking into

account all the modifications (Fig. 10, shows an flowchart for a router implementing

adaptive routing when a trigger event is detected, see "the performance is maximized

by solving the linear programming problem" recited in column 26 lines 15-19); regarding

claim 28, a computer program for performing the method of claim 1 when operated in a

computer system (Fig. 10, shows an flowchart for a router implementing adaptive

routing when a trigger event is detected, see "functions may also be implemented as

processing steps in a software program of a general purpose computer" recited in

column 26 lines 58-65).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of San Filippo III with Maynard et al. by using the

features, as taught by Aukia et al., in order to provide defining and determining

constraints between traffic flows through the links and nodes to describe the network

topology and behavior of the network; the modified scenario comprises of a modified

network topology, modified routing algorithm parameters, modified traffic engineering

constraints and/or modified traffic load compared to the initial scenario, solving a linear

programming problem with a non-linear objective function to minimize the data traffic

reconciliation, selecting a first and a second node solving a first linear programming

problem by computing the upper bound of traffic flow values from the first to the second

node, solving a second linear programming problem by computing the lower bound of

traffic flow values from the first to the second set of nodes, defining one or more solution

variables for the modified scenario and determining constraints between traffic flows

and calculating one consistent solution for all solution variables taking into account all

the modifications. The motivation using these functionalities is to enhance the system in

a cost effective manner.

10.   Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Filippo III (USP 7,068,630) in view of Maynard et al. (WO 96/199905) as applied to claim 17 above, and further in view of Hamada (USP 7,206,289 B2).

San Filippo and Maynard et al. describe the claimed limitations as discussed in paragraph 7 above. San Filippo and Maynard et al. do not disclose the following features: regarding claim 27, a network management system for managing a network comprising a plurality of nodes the nodes being interconnected by links management system comprising and the network and means for measuring the data traffic input into and output from nodes and links and the apparatus.

Hamada discloses a communication system for calculating traffic from data on packet transmission collected from routers with the following features: Regarding claim 27, a network management system for managing a network comprising a plurality of nodes the nodes being interconnected by links management system comprising (Fig. 1, telecommunications network, see "includes a NMS (Network Management System 100" recited in column 3 lines 11-20), the network and means for measuring the data traffic input into and output from nodes and links and the apparatus (Fig. 1 and Fig. 2, NMS connection to routers and links, see "NMS 100 send out a information collection request to the router" recited in column 3 lines 38-47).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of San Filippo III with Maynard et al. by using the features, as taught by Hamada, in order to provide a network management system for

managing a network comprising a plurality of nodes the nodes being interconnected by

links management system comprising and the network and means for measuring the

data traffic input into and output from nodes and links and the apparatus. The motivation

using the network management system capabilities is to enhance the system in a cost

effective manner.

11.   Claims 4, 18, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over San Filippo III (USP 7,068,630) in view of Maynard et al. (WO 96/199905) as

applied to claims 1 and 17 above, further in view of Aukia et al. (USP 6,594,268 B1) and

further in view of Basturk (USP 7,111,074 B2).

San Filippo III, Maynard et al. and Aukia et al. describe the claimed limitations as

discussed in paragraph 7 and 9 above. San Filippo III, Maynard et al. and Aukia et al.

do not disclose the following features: regarding claim 4, wherein step (b) further

comprises performing a routing procedure in the modified scenario; regarding claim 18,

wherein further comprises performing a routing process for the modified scenario;

regarding claim 21, wherein the constraints comprising any of the following constraints:

routing-based constraints link-based constraints node-based constraints error-based

constraints and regarding claim 22, wherein the constraints relate to any of the following

the size of data packets used in the network; relationship between the number of data

packets and the data traffic volume; constraints determined by the routing protocol used

in the network; the relationship between incoming and outgoing data traffic at the

plurality of nodes; the relationship between the data traffic at both ends of each link; the

relationship between the data traffic along the routes and the data traffic input into and

output from the network.

Basturk discloses communication system for controlled data path load balancing

on a data packet network with the following features: regarding claim 4, wherein step (b)

further comprises performing a routing procedure in the modified scenario (Fig. 1, route

computing sequence, see "each router broadcasts the state of every router's adjacent

link to every other router in the network topology" recited in column 1 lines 19-29 in

background of the invention); regarding claim 18, wherein further comprises performing

a routing process for the modified scenario (Fig. 1, route computing sequence, see

"each router broadcasts the state of every router's adjacent link to every other router in

the network topology" recited in column 1 lines 19-29 in background of the invention);

regarding claim 21, wherein the constraints comprising any of the following constraints:

routing-based constraints link-based constraints node-based constraints error-based

constraints (Fig.2, route computing sequence using label affecting data route

determination, see "link costs to be incurred per data link between the nodes" recited in

column 2 lines 47-55) and regarding claim 22, wherein the constraints relate to any of

the following the size of data packets used in the network; relationship between the

number of data packets and the data traffic volume; constraints determined by the

routing protocol used in the network; the relationship between incoming and outgoing

data traffic at the plurality of nodes; the relationship between the data traffic at both

ends of each link; the relationship between the data traffic along the routes and the data

traffic input into and output from the network

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of San Filippo III with Maynard et al. and with Aukia et al.

by using the features, as taught by Basturk, in order to provide further performing a

routing procedure, the constraints comprising any of routing-based constraints link-

based constraints node-based constraints error-based constraints, the constraints relate

to any of the following the size of data packets used in the network; relationship

between the number of data packets and the data traffic volume, constraints determined

by the routing protocol used in the network; the relationship between incoming and

outgoing data traffic at the plurality of nodes the relationship between the data traffic at

both ends of each link and the relationship between the data traffic along the routes and

the data traffic input into and output from the network. The motivation using the network

management system capabilities is to enhance the system in a cost effective manner.

12.   Claims 13-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over San Filippo III (USP 7,068,630) in view of Maynard et al. (WO 96/199905) as

applied to claims 1 and 17 above, further in view of Aukia et al. (USP 6,594,268 B1) and

further in view of Baumann et al. (US 7,047,309 B2).

San Filippo III, Maynard et al. and Aukia et al. describe the claimed limitations as

discussed in paragraph 7 and 9 above. San Filippo III, Maynard et al. and Aukia et al.

do not disclose the following features: regarding claim 13, wherein the constraints

comprise non-linear constraints; regarding claim 14, wherein a linear approximation to a

non-linear constraint is used; regarding claim 20, wherein the constraints in step (b)

include relations among data traffic rates based on the definition of network protocol

(such as IP, TCP, UDP) which defines the network behavior.

Baumann et al. discloses communication system for load balancing and dynamic

control of multiple data streams with the following features: regarding claim 13, wherein

the constraints comprise non-linear constraints (Fig. 1, data processing system network,

see "non-linear constrains on the network include data distribution like text, code,

images, video, audio mix and differences in equipment performance and user skill to

operate" recited in column 1 lines 22-44 in background of the invention); regarding

claim 14, wherein a linear approximation to a non-linear constraint is used (Fig. 1, data

processing system network, see "performance is tracked and number and data stream

dynamically modified as conditions in the network infrastructure" recited in column 3

lines 4-16); regarding claim 20, wherein the constraints in step (b) include relations

among data traffic rates based on the definition of network protocol (such as IP, TCP,

UDP) which defines the network behavior (Fig. 3, a system performing large data

transfer over the Internet, see "available bandwidth utilization during transfer of large

data stream over a TCP/IP network" recited in column 3 lines 4-5 and column 1 lines

31-34).

It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of San Filippo III with Maynard et al. and with Aukia et al.

by using the features, as taught by Baumann et al., in order to provide the constraints

comprise non-linear constraints, a linear approximation to a non-linear constraint is

used and the constraints include relations among data traffic rates based on the

definition of network protocol (such as IP, TCP, UDP) which defines the network

behavior. The motivation using the network management system capabilities is to

enhance the system in a cost effective manner.

13.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over San

Filippo III (USP 7,068,630) in view of Maynard et al. (WO 96/199905) as applied to

claim 1 above, and further in view of Takase et al. (USP 5,042,027).

      San Filippo II and Maynard et al. disclose the claimed limitations as described in

paragraph 7 above, San Filippo III and Maynard et al. do not disclose the following

features: regarding claim 16, further comprising repeating step (a) at different times

and/or at periodic intervals.

      Takase et al. discloses a communication system for controlling the load on the

network with the following features: regarding claim 16, further comprising repeating

step (a) at different times and/or at periodic intervals (Fig.1, communication node, call

controller and network controller, see "the measurements are continuously made a

constant period of time" recited in column 5 lines 35-44).

      It would have been obvious to one of the ordinary skill in the art at the time of

invention to modify the system of San Filippo III with Maynard et al. by using the

features, as taught by Takase et al., in order to provide repeating step (a) at different

times and/or at periodic intervals. The motivation using the network management

system capabilities is to enhance the system in a cost effective manner.

Response to Arguments

14.   Applicant's arguments with respect to claims 1-28 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to SYED BOKHARI whose telephone number is (571)270-

3115. The examiner can normally be reached on Monday through Friday 8:00-17:00

Hrs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kwang B. Yao can be reached on (571) 272-3182. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Syed Bokhari/

Examiner, Art Unit 2616

8/15/2008

/Kwang B. Yao/

Supervisory Patent Examiner, Art Unit 2616